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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,750

02/01/2006

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9947

270 7590 06/25/2009  
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EXAMINER

STALDER, MELISSA A

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

06/25/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,750	<b>Applicant(s)</b> SHINDO ET AL.	
	<b>Examiner</b> MELISSA STALDER	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,7 and 9-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7 and 9-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasumi (JP 63210291) in view of Maekawa (JP 62030615). Kawasumi teaches a high purity copper sulfate where Ag is removed to a concentration as low as 0.1 ppm or less Ag. It would therefore be obvious to one of ordinary skill in the art at the time of the invention to selectively remove Ag to as low a concentration as possible as this would be an optimization of the teachings of Kawasumi. Maekawa teaches a copper sulfate that is 99 wt% or more pure and has low concentrations of Ni, Fe, and water insolubles. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the teachings of Maekawa to remove the metal impurities in the copper sulfate to as low a concentration as possible so that the copper sulfate is over 99% wt pure. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Maekawa with the teachings of Kawasumi because both teach a process for purifying copper sulfate and Maekawa teaches an inexpensive process for removing the metals.

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Claims 7, 9-17 and 19-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasumi, Maekawa, and Batura (SU 1726381). Batura teaches a process that uses active carbon and sulphuric acid to recrystallize the copper sulphate to remove impurities. Maekawa teaches a heating step after the copper is dissolved in the acid. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Maekawa and Kawasumi with the teachings of Batura because Batura teaches a high purity of copper sulphate with regard to iron removal and Maekawa and Kawasumi teach the removal of other metals from the copper sulphate. It would have been obvious to optimize the removal of impurities as these references teach.

Regarding claims 19-21, Batura teaches a recycling (retaining) of the mother liquor and Maekawa teaches the cooling of this liquid. It would have been obvious to one of ordinary skill in the art at the time of the invention to dry the crystals at this temperature because this would only require optimization of the concentration and drying step.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasumi, Maekawa, and Batura as applied to claims 7, 9-17 and 19-21 above, and further in view of DeMarthe (US 4,288,304). DeMarthe teaches that it is well known in the art to use D2EHPA as an extraction solvent when extracting copper. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine DeMarthe with the teachings of Kawasumi, Maekawa, and Batura because the

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extraction process of DeMarthe is a process that removes impurities from the copper sulfate which is what the other references are teachings – a high purity copper sulfate.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELISSA STALDER whose telephone number is (571)270-5832. The examiner can normally be reached on Monday-Friday, 8:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 571-272-1234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MS

06-22-09

/Melvin Curtis Mayes/  
Supervisory Patent Examiner, Art Unit 1793